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## THE MINNESOTA EXPERIMENT STATION

IN COOPERATION WITH THE

UNITED STATES DEPARTMENT OF AGRICULTURE.

## MEMORANDUM ON "PRIMOST" FLAX.

The variety of flax known as "Primost," or Minnesota No. 25, was originated by the Minnesota Experiment Station in cooperation with the Bureau of Plant Industry of the United States Department of Agriculture. This variety of flax was first taken from the nursery at University Farm, St. Anthony Park, Minnesota, to the field tests in 1902. Its average yield for the three years 1902-03-04 was 20 per cent more than the average yield of the best stocks of the variety of flax commonly used throughout Minnesota and the Dakotas. This means that this variety should yield 12 bushels per acre throughout the State where the common variety averages 10 bushels. The high value per bushel of seed of this new variety may be illustrated as follows: A bushel of seed of common flax will sow one and one-half acres, and the price of common flax averages on the market about \$1.00 per bushel. Four bushels of seed of common flax, worth \$4.00, will sow 6 acres, and will produce at the average yield of 10 bushels per acre, a crop of 60 bushels, at \$1.00 per bushel worth \$60.00, or \$56.00 more than the value of the seed.

Four bushels of "Primost" flax at \$2.50 per bushel, costing \$10, on 6 acres yielding 12 bushels per acre, will produce 72 bushels, which at \$1 per bushel, would give \$72, or \$62 more than the cost of the seed, an immediate net gain over common flax of \$6, or \$1 per acre.

Assuming that the 60 bushels of common flax is worth \$1 per bushel, and that the new flax will sell for seed at \$1.50 per bushel, and that the farmer wishes to sow 20 bushels and sell the remainder, we have the following comparison: Taking out the 20 bushels for seed, we have for sale, in the case of the old-fashioned variety, 40 bushels at \$1 per bushel, or the cash annual return of \$40. In the case of the new flax, after sowing 20 bushels, we have for sale 52 bushels at \$1.50 per bushel, giving \$78, or an additional profit of \$38, or more than \$6 profit per acre. The largest profits, however, should come from the crop from the 20 acres the second and following years, when larger fields of flax can be grown for seed and to sell on the market. Besides thus aiding their communities to get this seed for general sowing, official co-operators should make a profit for themselves after spending liberally for advertising, cleaning the seed, etc. The State Experiment Station, in cooperation with the United States Department of Agriculture, is very desirous of building up a class of growers of pure-bred seeds as well as bettering the business of producing pure-bred stock. And the effort is being made to establish prices for valuable new seeds which are

enough higher than the market prices of the grains to make pure seed growing a profitable business. Those who are invited by the State Experiment Station to become official cooperators in growing pure-bred seed, and are prepared thus to aid in developing the state, can hardly afford not to take part in this work. Distributing pure-bred seeds at a high price through farmers who are highly recommended by grain dealers and others who know the kind of farming they do, is proving far more practical in many cases than distribution at low prices or free distribution. The higher the price the Experiment station establishes for a valuable new variety the higher the price the grower can in turn secure, and this higher price keeps the Station's chosen cooperators and those to whom they sell the new seeds from selling their crops on the open market. The extra price keeps the distribution going until new varieties are generally distributed to all farmers. Thus Minn. No. 163 and Minn. No. 169 wheats have spread to cover in 1904 nearly a half million acres. Many of the several hundred cooperators have made from \$100 to \$1,000 and more from one of these new varieties of pure-bred wheats. Mr. Johnson, in Kittson County, said that he purchased 125 bushels of Minn. No. 163 wheat from one of the Minnesota Experiment Station pure-bred seed cooperators, Wm. Ash, of the same county. He sowed this wheat on 100 acres of land and secured 25 bushels per acre, when on his other fields and adjacent farms the yield was only twenty bushels. This was in a year when wheat was worth only 55 cents at the local market, several miles away. His neighbors came to his granary and bought all of this wheat he cared to spare at 80 cents per bushel. The 2,500 bushels thus brought \$2,000, or \$900 more than would the 2,000 bushels he would have grown of the old-fashioned wheats, which brought only 55 cents per bushel, or \$1,100.

Not every cooperator will make a large net profit, as some people are not adapted to the business, and fail in not being careful growers of clean seeds, or can not learn the art of liberal advertising, but if a new variety will sell at 50 per cent above common grain the first year, 30 per cent above the second year, 20 per cent above the third year, and 15 per cent above the fourth year, the aggregate added income is considerable. And farmers generally are glad to have those of our best seed growers who can be depended upon to produce good seeds for them realize such profits as will insure that they keep in the business so that in time every one may secure seeds bred to yield more value per acre and clean of weed seeds and free from diseases. All hands should be ready to join in cooperating with the Experiment Stations and with the United States Department of Agriculture in increasing the ridiculously low average yields of our staple crops. Public funds can best be utilized in creating higher values by intelligent breeding. Private cooperative enterprise should attend to the multiplication and wide distribution of these best new pure bred seeds.

W. M. HAYS.